

**Final ENVIRONMENTAL ASSESSMENT**

**for**

**Fish Passage funds for**  
**Two Irrigation District Piping Projects**  
**near Milton-Freewater, Oregon**

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Michelle Eames and Jason Flory  
U.S. Fish and Wildlife Service  
11103 East Montgomery Drive  
Spokane, WA 99206

## **Introduction**

This Environmental Analysis evaluates the impacts from two irrigation efficiency projects near Milton-Freewater, Oregon: the first in the Walla Walla River Irrigation District system, which includes 2,200 feet of piping an open irrigation ditch; and the second in the Hudson Bay District Improvement Company system, which includes up to 2,500 feet of piping of an open irrigation ditch. Implementing these projects will allow legal protection of some Walla Walla River flows which are already being bypassed by the two districts.

In 2005 the U.S. Fish and Wildlife Service (Service) received pass-through funds (a congressional earmark) of \$246,527 in the Partners for Fish and Wildlife Program (Partners Program) to be provided to the Walla Walla County Watershed Planning (County) for fish passage and salmon recovery efforts.

The Partners for Fish and Wildlife Program strives to develop partnerships with non-federal landowners to support the mission of the Service: “working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.” At the heart of the Service’s mission are the conservation and management of the Federal Trust Resources: migratory birds; threatened and endangered species; inter-jurisdictional fish; certain marine mammals; and species of international concern.

The County and the Service developed and implemented a Cooperative Agreement that provided for the transfer of the “Walla Walla Passage Funds” to the County. The County developed a proposed budget that provided \$212,500 for salmonid passage improvement in the Walla Walla River Basin, with the balance of the money to be used by the County and the Service for environmental compliance and project administration.

The Cooperative Agreement included a process for evaluation of project proposals. Project proposals were evaluated mainly based on whether they: 1) are identified in a draft or final plan; 2) are beneficial for steelhead and bull trout both federally endangered fish species under the Endangered Species Act, as amended (ESA); 3) include 15% cost-share; 4) substantially improve fish passage; and 5) are in a priority reach location. In addition, the project proposals should also: include partnership opportunities; require a single year of funding; include an adequate monitoring plan; have a favorable cost/benefit ratio; include long-term protection with low maintenance; and have multiple/timely benefits.

The County advertised a Request for Proposals, which ended September 8, 2005. The County received two applications, and has proposed to fund both projects:

1. The Powell/Pleasantview piping project (Powell Project) by the Walla Walla River Irrigation District (WWRID) in Umatilla County, Oregon.

2. The Hy-Line Canal Piping Walla Walla River Conservation project(Hyline Project) by the Hudson Bay District Improvement Company (HBDIC), Umatilla County, Oregon.

## **Proposed Project**

### **U.S. Fish and Wildlife Service Proposed Project Proposal-acceptance of the County's Funding Request including:**

**The Powell project:** The Powell project proposes to automate the Powell ditch headgate and coordinate its operation with the Milton pump station, which draws water from the Powell ditch. Currently, the total expected flow demand of the Milton pump station is added to the expected flow demand of the Powell/Pleasantview Ditch users and diverted at the Powell headgate. Because of this, during times when demand on the Milton ditch decreases, the Powell ditch floods; during times when demand on the Milton ditch exceeds expectations, the Powell ditch is dewatered. Automating the Powell headgate and using telemetry to coordinate operation with demand at the Milton pump station will reduce water waste. The reduced waste would be considerable during early spring and late summer (sometimes as high as 3 cfs), and would decrease towards zero during the middle summer months.

The funding from the Walla Walla Fish Passage funds would be used to automate the Powell/Pleasantview headgate and add telemetry at the Milton pump station. This will ensure that the WWRID delivers only the water necessary to the Milton Ditch Pump Station (see Proposed Action). The money from the Service will be specifically used for the telemetry and automation of the Powell/Pleasantview headgate-Milton pump station complex and for purchasing pipe and fittings for up to 2,550 feet of the open canal section of the project. The Walla Walla Passage funds will not be used for replacing the existing pipeline under an urbanized area.

The expected water savings from piping the open canal section of the Powell ditch are in the range of 0.24 to 0.48 cfs of water. The expected water savings from automation and telemetry of the Powell/Pleasantview headgate-Milton pump station complex are estimated to be as high as 3 cfs in the spring and early summer.

WWRID is proposing to eventually pipe, rehabilitate, and automate a total of approximately 4,150 feet of the Powell/Pleasantview Ditch supplying water to approximately 46 irrigators serving 519 acres. Approximately 1,600 feet of the ditch was piped over 70 years ago and has since deteriorated, resulting in significant leakage and potential for failure under a heavily urbanized area. The total project would rehabilitate this previously piped section and pipe the remaining 2,550 feet of open canal. There is an estimated water seepage savings of ½ to 1 cfs per mile of piped ditch. Funding for rehabilitation of the underground pipe has not been secured by the WWRID at this time.

**The Hy-Line project:** This HBDIC irrigation delivery efficiency project would contribute to a portion of 1.4 miles of piping an open canal (the total extent of Phase 1) serving 24 users that farm a combined 1,294 acres. HBDIC will use the Walla Walla Passage funds to match Oregon Watershed Enhancement Board (OWEB) funding to pay for the increases in pipe cost on 1,300 feet of 36” pipe, plus fittings, and 900 feet of 30” pipe (up to 2,200 feet total piping).

Included in the first phase is construction of a new adjustable rated concrete structure at the main diversion (Duff Weir) in the White Canal that would provide better control of water delivery. A second new concrete box would be built where the HY-LINE and Richartz ditches split apart at Trumball Lane. Walla Walla Fish Passage funds would not be used for these improvements.

The 2200 feet of piping purchased by the Walla Walla Passage Funds may conserve about 0.21 to 0.42 cfs of water. The HBDIC is mitigating for any potential loss of aquifer recharge from ditch leakage by operating a shallow aquifer recharge project, which has had demonstrable success in improving the groundwater table in surrounding wells and improving the flows of down-gradient springs.

HBDIC hopes to secure additional funding to implement additional piping, but to date, this funding has not been acquired.

**ESA Listed Species:** The Columbia River bull trout population was listed as federally threatened in 1998. The Mid-Columbia Basin population of steelhead was listed as threatened in 1999. Historically (from approximately the late 1800’s to 2000), irrigation diversions caused a stretch of the Walla Walla River in Oregon to dry up annually, which negatively impacted bull trout. In 2000, the Service and three irrigation districts (including the WWRID and HBDIC) negotiated a non-adjudicated settlement agreement (Agreement). Together with subsequent amendments, the Agreement resulted in year-round flow in that previously dry stretch of the river beginning in 2001. However, these flows are not fully legally protected under State water law. Many planning efforts in the Walla Walla watershed have recognized the need for increased flows to ensure that bull trout can move upstream into coolwater refugia and spawning habitat (NPCC 2005, USFWS 2002).

In order to meet the Settlement Agreement, the irrigation districts reduced the amount of water they diverted for irrigation and bypassed that water into the Walla Walla River. The two projects described above would increase efficiency in the irrigation system, thereby conserving water. These conserved flows would then be “exchanged” for an equivalent amount of the bypassed Agreement flows in the Walla Walla River. This would allow the Districts to legally protect the conserved water in the Walla Walla River through the Oregon Water Resources Department Conserved Water Application (Oregon Conserved Water Program), and may also result in additional water being available to use for irrigation in fields, rather than being lost in open ditches. The irrigation districts have implemented similar projects in the past, and likely would implement similar projects in the future, with the goal of incrementally protecting the whole Agreement flow.

## **1.0 Purpose of and Need for Action**

### **1.1 Purpose of Action**

The Service's purpose for the approval of the Hyline and Powell projects would be to increase the legal in-stream protection for as much as 4 cfs of the stream's flows in the Walla Walla River, thereby providing long-term benefit for salmonid fish passage in a key location in that river. The purpose of the funding is to provide for the pipe, improve the piping, and/or automate the irrigation delivery systems and ditches to gain efficiencies, and then protect the saved water instream. Both the HBDIC and WWRID are already providing bypassed flows in the Walla Walla River. Implementation of the project would not change the flows being provided in the Walla Walla River.

### **1.2 Need(s) for Action**

There is a need to increase flows in the Walla Walla River to benefit bull trout, steelhead, and other resident or anadromous fish. There is also a need to legally protect existing flows in the Walla Walla River to better ensure their maintenance over the long term. These proposed projects provide one means towards that end

The protection of bypassed water in Oregon is identified as a key to success for recovering listed bull trout and steelhead. The Walla Walla River's most limiting factor for fish populations is reduced in-stream flow during spring, summer and fall (USFWS 2002). The Ecosystem Diagnosis and Treatment (EDT) Fish production analysis completed for the Walla Walla Subbasin Planning effort (NPCC 2005) also identified river flow as being a primary limiting factor for steelhead, Chinook, and bull trout production. While implementation of the proposed actions would not increase flows in the Walla Walla River, they would result in additional legal protection of some portion of the flows already being bypassed.

The Agreement between the Service, HBDIC, WWRID, and Gardena Farms Irrigation District #13 (in Washington) has established minimum year-round flows in the Walla Walla River. Through this agreement, the districts are bypassing a portion of their water rights to ensure fish passage and improve habitat for ESA listed bull trout. To make up for the required bypassed flows, HBDIC and WWRID patrons have increased irrigation delivery efficiency and supplemented their water supplies by increasing their use of wells. However, these actions do not fully recoup the diversion reductions they undertook to achieve the flows bypassed under the Agreement. The result is less water available for district patrons and an increased use of wells, which is an economic concern for the HBDIC and WWRID patrons and may impact the shallow and deep aquifers. The HBDIC has been successfully mitigating for impacts to the shallow aquifer and down-gradient spring creeks by implementing their shallow aquifer recharge site. As the two Oregon irrigation districts are aggressively completing ditch piping projects, they are transferring a portion of the saved water rights to the river as a legally protected instream

water right using the Oregon Conserved Water Program, with the eventual goal of legally protecting the whole bypassed flow.

### **National Environmental Policy Act Responsibilities**

The National Environmental Protection Act (NEPA) requires Federal agencies to evaluate and disclose the effects of their proposed actions on the human environment in a written statement, generally an Environmental Impact Statement (EIS), or an Environmental Assessment (EA). An EA is a concise public document that briefly discusses the need for and alternatives to an action and provides sufficient evidence and analysis to support a determination of no significant impacts or a determination to prepare an EIS. With respect to Partners Program projects in general, compliance with NEPA is not a direct obligation or requirement of the County; however, the Service must comply with NEPA in making their decision on the approval of Federal funds, which have been directed to the County by pass-through to recover and restore the Service's Trust Species. Consequently, the appropriate environmental documentation must be prepared before funds are approved to implement the County's proposed projects. The Services have determined that an EA is appropriate for this action since it has minimal potential for significant effects on the environment.

The preparation of this document follows the guidelines in the Council on Environmental Quality NEPA Regulations (40 C.F.R. 1500-1508), and the Services' NEPA implementing procedures.

### **Other Laws and Authorities**

#### Clean Water Act

The Service must consider our responsibilities under the Clean Water Act. The Service has determined that the proposed project does not require a Clean Water Act Permit pursuant to 33 CFR part 323.4(a)[3].

#### Endangered Species Act

The Service must consider whether there are adverse affects to listed species requiring consultation under Section 7 of the Endangered Species Act. The Service has determined that the projects would have no negative effects on listed bull trout or steelhead, and no consultation is necessary (Gary Wade, NMFS, Pers. Comm., June 21, 2006.)

#### National Historic Preservation Act

The Service must consider whether the projects affect cultural or historic resources under Section 106 of the National Historic Preservation Act of 1966. The Service and the applicants for Partners funding are coordinating with the Service's Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted

prior to ground disturbing activities associated with the grants for the proposed projects (see Appendix I).

### **1.3 Decision(s) to be Made**

The Service will decide whether the County's proposed actions to fund the two projects would benefit salmonid fish passage and fit the cooperative agreement expectations. The Service will analyze the impacts that the proposed actions and other alternatives, including the No Action alternative, would have on the human environment.

### **1.4 Scoping Process**

#### **1.4.1 Consultation and Coordination**

The following agencies and organizations have participated in the development of this proposed action or have been consulted during its development.

- Walla Walla County Watershed Planning
- Walla Walla Basin Watershed Council
- Hudson Bay District Improvement Company
- Walla Walla River Irrigation District
- Walla Walla HCP Bi-State Coordinating committee
- Confederated Tribes of the Umatilla Indian Reservation
- National Marine Fisheries Service, Ellensburg and LaGrande Offices

#### **1.4.2 Issues and Concerns**

A. Groundwater Resources and Landowner Concerns-Some local landowners in the Walla Walla watershed are concerned that as irrigation efficiencies increase, and water continues to be bypassed in the Walla Walla River for fish passage, less groundwater is entering the shallow water aquifer, thus drying up down-gradient streams and springs. This issue has been brought up in several watershed meetings, including at NEPA scoping meetings in November, 2005, for the Walla Walla HCP. Because of these expressed concerns, we have explored this issue in this Environmental Assessment, and believe that the impacts are minimized.

B. Threatened and Endangered Fish Species-Bull trout and steelhead, both listed species, need adequate water in the mainstem Walla Walla River to ensure they are not stranded and can access spawning, rearing, and overwintering areas. This has been recognized in many fish and watershed plans, including the draft Bull Trout Recovery Plan chapter for the Umatilla/Walla Walla (USFWS 2002), the Walla Walla Subbasin Plan (NPCC 2004), and the draft Snake River Salmon Recovery Plan (NMFS, 2006).

C. Oregon State Water Law- It is also imperative to protect conserved water instream in the Walla Walla River under State law, so that other water users do not take advantage of unprotected flows in the river.

D. Cultural Resources- While the ditches at the proposed project sites have been routinely maintained and modified, they were most likely constructed more than 50 years ago. Consequently, they could be considered historic properties that are potentially eligible to the National Register of Historic Places (NRHP). The Service and the applicants for Partners funding are coordinating with the Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted prior to ground disturbing activities associated with the grants for the proposed projects (see Appendix I).

## **Alternatives**

### **2.1 Alternative A - No Action Alternative**

In this alternative the Service would not approve the funding of the County's two proposed projects. At this time, it is possible that the projects could eventually be funded from other sources.

Under the No Action Alternative the funding would remain within the budget of the Walla Walla County, likely to be used on other salmonid passage activities. Also, the County or districts would likely implement portions of the projects that already have funding, and would explore alternative funding sources to implement the full projects. Full project implementation by HBDIC and WWRID might be delayed without assistance from the Walla Walla Passage funds.

The overall result of the No Action Alternative is that up to about 4 cfs of flows currently bypassed under the Agreement would not be protected under State water law, or would be delayed in their protection. Bypassed flows would be at risk of diversion by junior water right holders.

### **2.2 Alternative B - Proposed Action**

In this alternative the Service would approve the implementation of the two piping projects, thereby increasing efficiencies by a total of 3.5 to 4 cfs. The conserved water would then be exchanged for an equivalent amount of water that is currently bypassed into the Walla Walla River via the Agreement. The water in the river resulting from the increased efficiencies could then be legally protected through Oregon's Conserve Program. Legal protection of those flows may allow the State of Oregon to better regulate water use in the Walla Walla River.

Environmental impacts of the proposed action would be minimized by using the following Best Management Practices during all project activities:

1. All regulatory permits and official project authorizations (e.g., National Environmental Policy Act, National Historic Preservation Act) will be

secured before project implementation. All terms and conditions in these regulatory permits and other official project authorizations will be followed to eliminate or reduce adverse impacts to any endangered, threatened, or sensitive species or their critical habitats.

2. Irrigation districts will submit Applications for the Allocation of Conserved Water through the Oregon Water Resources Department.
3. HBDIC will continue to test shallow water aquifer recharge through the 5-year temporary license period, and if successful explore potential for permanent water rights.
4. Streams, riparian zones, and wetlands will not be used as equipment staging or refueling areas. Equipment will be stored, serviced, and fueled away from aquatic habitats or other sensitive areas.
5. Excavated materials removed during project implementation will be salvaged, reused, or stockpiled to eliminate future environmental problems.
6. The Service and the applicants for Partners funding would coordinate with the Service's Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted prior to ground disturbing activities associated with the grants for the proposed projects (see Appendix I).

### Powell Project

The WWRID is proposing to pipe, rehabilitate, and automate the first approximately 4,150 feet of the Powell/Pleasantview Ditch supplying water to approximately 75 irrigators, and serving 1,570 acres. There is an estimated water seepage savings of ½ to 1 cfs per mile of piped ditch. The Walla Walla Passage funds would contribute to a portion of this larger project. The conserved water from this project would be protected instream using the Oregon Water Resources Department Conserved Water Application and would help the Walla Walla River Irrigation District continue to bypass a portion of their senior water rights down the Walla Walla River as required by the Agreement with the Service.

The proposed Powell/Pleasantview Project consists of three components. The Walla Walla Passage funds would only be used for the second and third components (see Figure 1).

**1. Component I** consists of lining/replacing approximately 1,600' of 30" diameter concrete pipe. The pipe was originally installed over 70 years ago in 3-foot sections and can be lined/replaced with minimal soil disturbance. The pipe sections would be lined/replaced using a pothole method in existing city streets and alleys. The concrete pipe currently runs under an urbanized area and is at risk of failure due to deterioration.

Minor realignment may be necessary; this would be done by running the pipe under existing city streets with city water and sewer lines. There are also phone lines and gas lines installed in the area. The estimated depth disturbance would be the depth of the current pipe plus five feet.

The pipeline would be either lined or replaced. If the lining option is chosen, developing pothole access points to the pipe would allow for minimal disturbance of soil. These potholes would likely occur in areas of paved city streets or alleys. If a replacement option is chosen, the existing pipe would be dug up and replaced and the new pipe would be kept within the city road right of way via some minor realignment. The areas to be disturbed are within the city of Milton Freewater and have been disturbed in the past to install city water and sewer lines, gas lines, electrical, phone, streets and pavement. The depth of disturbance would be equal to the previously installed pipe: approximately five feet overall. In order to avoid a Church's landscaping, a potential realignment of a portion of the pipeline is being evaluated.

This component of the project would be paid for with OWEB funds, NRCS funds, or other grants needed to address increased expenses.

**2. Component II** consists of converting approximately 2,550 feet of open irrigation canal to a piped delivery system. The existing irrigation canal requires regular mechanical cleaning due to heavy silt deposits. Silt deposits require a backhoe to dig and clean the ditch at regular multi-year intervals. The proposed pipeline would be installed in the existing ditch. Fill material, if needed, would come from a commercial provider. The estimated depth disturbance would be equal to the depth of the existing ditch plus five feet. The 2,550 feet of new pipe would connect with the pump station that was installed as part of the Milton Ditch Piping project (See figure 1 and 2, map and aerial photo of project).

This component of the project would be paid for with OWEB funds, NRCS funds, Walla Walla Passage funds, or other grants needed to address increased expenses.

**3. Component III** consists of installing automation at the Powell/Pleasantview headgate and a flow level logger downstream at the Milton Pump Station. The Milton Ditch pump station utilizes variable speed pumps to deliver water to 16 irrigators farming a total of 199 acres. The headgate would automatically adjust to the downstream canal level to ensure that the District is only delivering water required at the Milton Pump Station. This component would require no soil disturbance.

Current operations require the total expected flow demand of the pump station to be added to the ditch. This project would add an automated headgate to the beginning of the canal that would react to the variable demand of the pump station and automatically regulate the flows, thereby reducing waste. The reduced waste would be considerable during early spring and late summer (sometimes as high as 3 cfs), and would decrease towards zero during the middle summer months. The SCM Consultants Inc. would

engineer and design the piping and rehabilitation efforts while Aqua Systems 2000 would design and install the needed automation equipment. The project would build upon the current supervisory control and data acquisition (SCADA) system installed and operated by WWRID. The SCADA system allows for more effective distribution of water resources, thereby maximizing delivery efficiency.

This component of the project would be approved by the Service to be paid for by the Walla Walla Passage funds.

### Hyline Project

Phase I of the Hy-line project involves the construction of a new adjustable rated concrete structure built at the main diversion (Duff Weir) in the White Canal, thus providing better control of the water going north to both the new HY-LINE pipe and the existing Richartz pipe. A second new concrete box would be built where the HY-LINE and Richartz split apart at Trumball Lane. Phase I also involves piping a total of 1.4 miles of open canal serving 24 users that farm a combined 1,294 acres (1,005 acres are 1903 water rights). The district has already installed 4,400 feet of 18-inch pipe.

The HBDIC proposes to use the Walla Walla Passage funds to match Oregon Watershed Enhancement Board (OWEB) funding to pay for the increases in pipe cost on 1,300 feet of 36" pipe, plus fittings, and 900 feet of 30" pipe (up to 2,200 feet total piping). If we calculating the total cost of pipe and fittings at approximately \$72 per foot (John Zerba pers. comm.), the Walla Walla Passage funds would pay for about 880 feet of pipe (subject to current pipe pricing). For the analysis, we assume the Walla Walla passage funds would be used for 2,200 feet or less of piping, starting at about the beginning of the Hy-line ditch piping project (See figure 2).

This project would exchange approximately 0.21 to 0.42 cfs of currently unprotected water with an equivalent amount of protected water in the Walla Walla River. Construction is expected to begin in late summer, 2006.

An OWEB proposal for Hy-line ditch piping was recommended for funding by OWEB staff and was approved by their Board in mid-September. The HBDIC has received \$60,000 in NRCS funds, via the Walla Walla Watershed Alliance, for the initial turnout structure, weir, and the beginning of the pipe.

The project construction details for Phase 1 are as follows (John Zerba, HBDIC, pers.comm; project application materials). While the Walla Walla Passage funds will be used for 2,200 feet or less of the larger project, the construction details below are useful to understand the types of impacts that may occur.

- A new concrete box has already been built where the HY-LINE and Richartz split apart at Trumball Lane. All flow entering this box would leave via a pipe, 300 feet of 36" corrugated double wall polyethylene for the Richartz. The first 1,500 feet down the HY-LINE would be 36" class 80 PVC PIP pipe (about 200 feet is already

laid) and the rest for Phase 1 would be 5,800 feet of 30" class 80 PVC PIP pipe. Both the Richartz and HY-LINE pipes have 36" watertight slide gates installed at the box.

- Pipe would be laid down on the existing right-of-way. The pipe would be laid down the existing canal as this route area is surrounded by fruit trees. The first 5,000' of the HY-LINE would be bedded with 3,800 cubic yard of soft back fill materials as with the first 300' down the Richartz. The back fill material going down the Richartz would require about 400 cubic yards of ¾ minis crushed rock to add support to the corrugated polyethylene pipe with the remainder being of back fill consisting of 300 cubic yards soft fill. The bedding of the pipe would come from stockpiles within the system and crushed rock from a rock pit.
- There would be air vents and inspection exits at all corners that are protected with wood post on both sides. Within Phase 1 there are three 90 degree sweeps, one 45 degree sweep, one state highway crossing [this is not within the initial 2200 feet], and another paved parking lot to cross. Phase 1 stops just short of the first member's turn out. The increased velocities at the discharge of this pipe would be diffused with an upright standpipe and a spring loaded lid. A concrete eco-block and pit-run rock would hold it in place.

The HBDIC is mitigating for the loss of ditch leakage recharging the aquifer by operating a shallow aquifer recharge project, which has shown success in improving the groundwater table in surrounding wells and in the improvement in the flows of down gradient springs.

**Funding:**

The following table summarizes the funding as described in the applications to Walla Walla County.

**Table 1. Powell Project**

Funding entity	FWS Passage Funding Received	In-Kind/ Cost Share contribution	Total Cost of Project	Description
WWRID/WWBWC-		17,921.00		Fiscal administration; 3 grants two entities
Funded by WWRID		174,163		Bonds, Insurance, Engineering; personnel; mileage; in-kind; contractors
WWRID		3,599.00		Monitoring Water Use 10 years; photo monitoring
WWRID		86,500.00		Pipe and fitting purchase 30"
WWRID		28,700.00		Concrete and Intake structure; bedding and fill dirt; Flow Meter, Automated Headgate
Landowner contribution		13,000.00		Easement Donations
OWEB		1,500.00		Secured- Requested from OWEB Personnel- WWBWC technician;
FWS	92,499			Contracted technical consultation, project management, pipeline work
FWS	51,900.00			Pipe and fitting purchase 30"; Increase in pipe cost last 6 months
<b>Total Costs</b>	144,399	\$325,383	\$469,782	

**Table 2. HY-Line piping project**

Funding entity	FWS Passage Funding	In-Kind/ Cost Share contribution	Total Cost of Project	Description
FWS	\$68,101			Pay for pipe cost increases on 2,200 feet of piping, (estimated at \$72 per foot)
NRCS		\$60,000		Already funded through Watershed Alliance; pays for initial turn out structure, weir, and beginning of pipe
OWEB		\$84,600		Secured; would pay for part of Phase 1
HBDIC		\$90,000		In kind Installation, Labor, Equipment
<b>Total Costs</b>	\$68,101	\$234,600	\$302,701	For Phase 1.

### 2.3 Comparison of the Alternatives

**Table 3. Comparison of Alternatives Matrix**

Alternative	Irrigation piping and rehab	Potential CFS of irrigation water conserved and potentially protected in Walla Walla River	Amount of water provided through HBDIC aquifer recharge
<b>A –No Action</b>	None	None	Up to 50 cfs between November 15 and May 15
<b>B – Walla Walla Passage Funds approved by FWS. For 2 County Projects</b>	WWRID 2550 feet	~0.24 to 0.48 cfs	Up to 50 cfs between November 15 and May 15
	WWRID automation	Up to 3 cfs	
	HBDIC 2200 feet	~0.21 to 0.42 cfs	

### 2.4 Alternatives Considered But Dismissed From Further Consideration

None

### 2.0 Affected Environment

The two irrigation efficiency projects will have an immediate impact through: 1) piping about 4,700 feet of open irrigation canal, and 2) the automation components, which will conserve water through efficient delivery. The projects will not change the amount of water bypassed in the Walla Walla River, but will increase a legally protected component of up to 4 cubic feet per second, from approximately the Little Walla Walla Diversion to the State line (approximately 6 miles). It is important for both steelhead and bull trout recovery to continue progress toward protecting instream flows in the Walla Walla River.

Figure 1. Map of Powell/Pleasantview project area

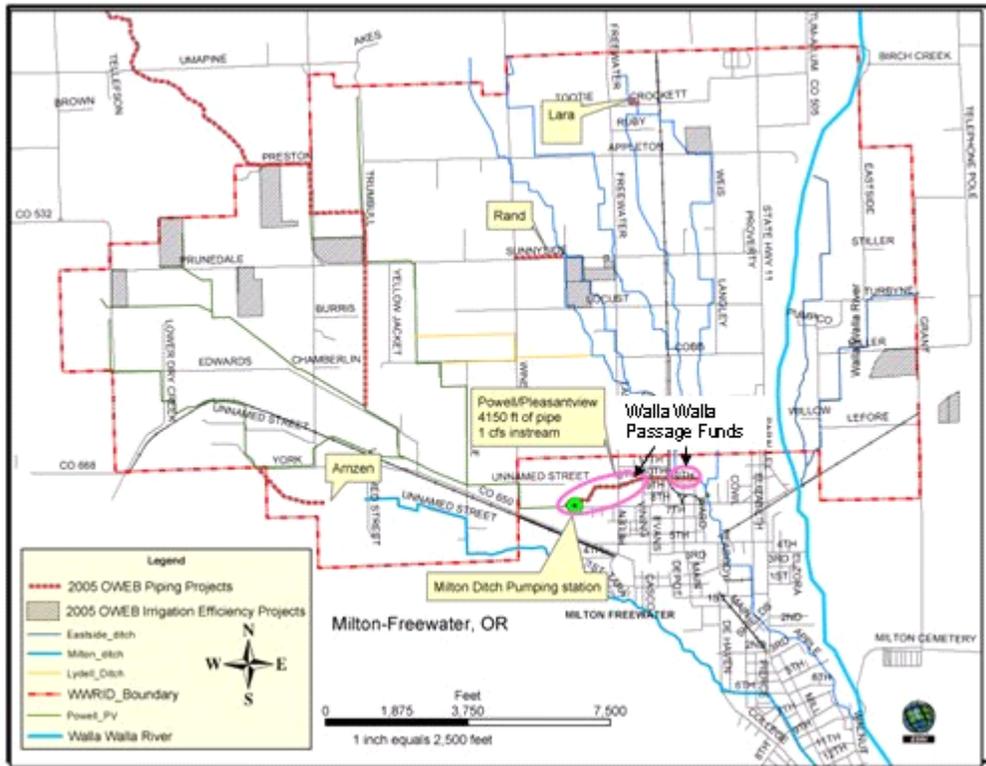
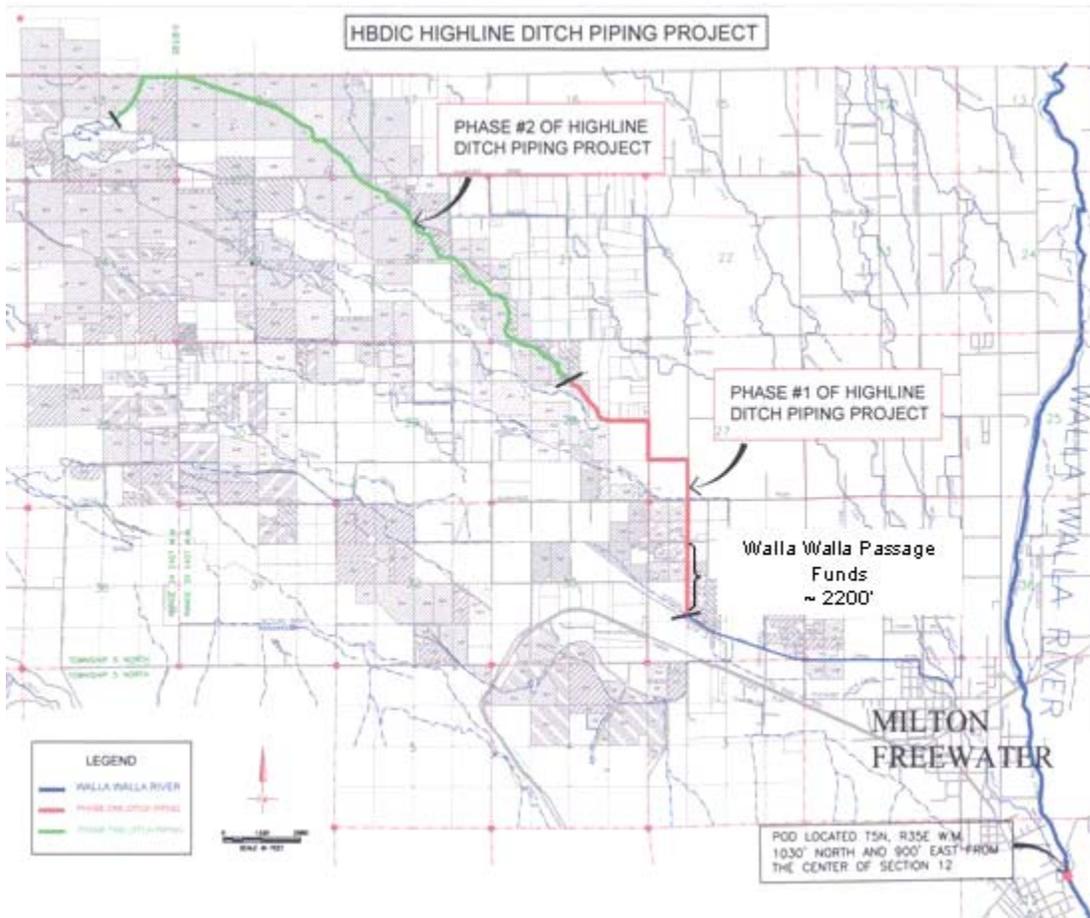


Figure 2. Map of HY-Line project area



The Service does not expect the proposed projects to have effects on: public health or safety; aesthetics; recreation; access to federal lands; social justice; unique geographic characteristics; historic or cultural resources; native plants and vegetation; wildlife, birds, or amphibians; or the spread of noxious weeds or non-native invasive species. We also do not expect the action to set a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects. The Service does not expect cumulative effects associated with the proposed projects.

#### A. Groundwater Resources and Landowner Concerns

Prior to European settlement, the Walla Walla River valley was likely a braided system of many river branches. Much of the mainstem, otherwise known as the Tumulum branch, has been straightened and diked for flood control. Some remnants of the old braids remain, including the Little Walla Walla River which is now managed as an irrigation canal. There are many other small permanent or intermittent streams and springs in a broad area northwest of Milton-Freewater. These are locally referred to as the “spring branches.” In recent years, some of the spring branch tributaries have dried up, or carried less water than in previous years. This may be due to the irrigation districts providing Agreement flows in the Walla Walla River mainstem, or due to other ongoing impacts such as: increased irrigation efficiencies both in the irrigation ditches and the fields, increased urban and rural development with resultant changes to groundwater infiltration, increased use of wells from either farmers or homeowners, or a combination of all of the above.

Although many of the planners in the watershed recognize this change to the hydrology of the spring branches as an issue, we do not completely understand the causes or inter-relationships between the surface water, groundwater, and spring branches.

In 2004, the Walla Walla Basin Watershed Council (WWBWC), and HBDIC implemented a re-charge project to test aquifer recharge as a tool to address declining aquifer levels and spring flows in the Walla Walla River valley. The project was operated under a 5-year limited license from Oregon Water Resources Department (OWRD). The license allowed use of up to 50 cfs from November 1 through May 15. In 2004 the project was implemented from April 8 until May 15. The recharge basins are run from HBDIC’s White Ditch, and are up-gradient of the Hyline ditch. The average groundwater intake rate during the test was 14 cfs. The 2004 test showed promising results, namely higher water levels in down-gradient wells. Anecdotal information also described down-gradient streams as running higher. The HBDIC and the WWBWC have expanded the 2004-2005 tests, both in duration and in water volume recharged to the aquifer.

The recharge tests are planned to be continued through the 5-year testing license period, then, assuming continued success, the WWBWC and HBDIC would likely apply to OWRD for a permanent water right (Bob Bower, WWBWC, Personal Communication.)

## B. Fisheries Resources and ESA

The Columbia River bull trout population was listed as federally threatened in 1998; the Mid Columbia population of steelhead trout was listed as threatened by the National Marine Fisheries Service in 1999.

There have been many species analyses and watershed planning processes developed in the last decade for the Walla Walla River basin. Many of these processes recognized that both bull trout and steelhead are impacted by low flows in the Walla Walla River (USFWS 2002; SRSRP 200X; NPCC 2005; Anglin et al., WRIA 32). Both species of fish require adequate flows at varying times of the year to ensure that their life history functions are met. They need adequate water levels and quality to allow them to access spawning, incubation, rearing, migration, and overwintering habitats. In general, both steelhead and bull trout need cold clean water without passage barriers.

The Walla Walla River mainstem, between about Milton-Freewater and the mouth of Mill Creek, provides habitats used by bull trout and steelhead at different times of the year. Specifically, bull trout may use river reaches within this area for subadult rearing, migration, and overwintering. Anadromous steelhead use the area for migration, with limited rearing and spawning (Cramer species reports referencing Mendel, Trump, Gembala 2003).

## C. Oregon State Water Law

Pursuant to the Agreement, the WWRID and HBDIC provide bypassed flows in the Walla Walla River. Both districts have been making progress on conservation projects to incrementally protect the flows under Oregon State Water Law.

## D. Cultural Resources

Some of the irrigation ditches in the Milton-Freewater area may be 70 years old, or older. However, the ditches at the proposed project sites have been routinely maintained and modified. It is still possible that they could be considered historic properties that are potentially eligible to the National Register of Historic Places (NRHP), thus the Service and the applicants for Partners funding are coordinating with the Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted prior to ground disturbing activities associated with the grants for the proposed projects (see Appendix I).

### **3.0 Environmental Consequences**

- 3.1** Alternative A – No Action. No change from conditions described under Affected Environment section.

### 3.2 Alternative B – Service’s Proposed Action.

#### A. Groundwater Resources and Landowner Concerns

No Action- The HBDIC and WWBWC would continue their aquifer recharge. The proposed irrigation efficiency projects would not be funded with Walla Walla Passage Funds, but may eventually receive other funding.

Proposed Action- There may be unquantifiable impacts to some spring branches. The test aquifer recharge project is southwest of a portion of the Hyline ditch. The ground water tends to flow northwest (Bob Bower, personal communication). Much of the impact is expected to be mitigated through implementation of HBDIC’s and WWBWC’s shallow aquifer recharge efforts, although the spatial distribution and movement is not entirely known.

Although irrigation efficiency may decrease groundwater additions from previously leaky ditches, this may allow some additional water to be applied to fields, a portion of which may still enter the shallow-water aquifer.

#### B. Fisheries Resources-

No Action- Bypassed flows in the Walla Walla River would likely continue. Instream protection of a portion of those flows would not occur, or would be delayed until the districts find other funding mechanisms.

Proposed Action- Although the approval of the County’s two proposed projects would result in additional river water being conserved and legally protected (up to about 4 cfs) as a result of the piping projects, the conserved water would not result in additional flow in the Walla Walla River. Therefore, there would be no habitat change in the river for bull trout or steelhead. However, there would be long-term benefits to bull trout and steelhead due to the legal protection of a portion of the flows that are required, thereby making progress toward legally protecting the entire bypassed flows from the Agreement.

The Powell project and Hyline projects would complement the multi-year effort by the Confederated Tribes of the Umatilla Indian Reservation, the US Army Corps of Engineers, the Walla Walla County Conservation District, and the Walla Walla Basin Watershed Council to increase river flows and eliminate fish passage barriers in the subbasin. This irrigation delivery efficiency activity is one of the targeted strategies in the Bi-State Walla Walla Basin Habitat Conservation Planning process, and would help to implement the irrigation efficiency strategy described in the Walla Walla Basin Agriculture Water Quality Plan, 2002 (ODA). The proposed project would also help to accomplish goals set forth in the draft Bull trout Recovery Plan (UWFWS 2002) the Walla Walla Subbasin Plan (NPCC 2005), the Snake River Salmon Recovery Plan (NMFS 2006), and the WRIA 32 Watershed Plan. Again, the project would not cause

immediate change in the river due to the Agreement required instream flows, however they would increase legal protection of a portion of those flows.

C. Oregon State Water Laws-

No Action- Instream legal protection of conserved water would not occur.

Proposed Action- Up to 4 cfs of conserved water from the projects would be protected instream using the Oregon Water Resources Department Conserved Water Application Program. Final amounts of instream flow protected depend on the results of the Oregon Water Resources Department’s review of the applications.

D. Cultural Resources

No Action-

There will be no change to the affected environment. If the districts find other sources of funding, review under NHPA may then be necessary.

Proposed Action-

Effects to historic properties are possible, but will be minimized or addressed through additional review and coordination with Service archaeologists. The Service and the applicants for Partners funding are coordinating with the Service’s Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted prior to ground disturbing activities associated with the grants for the proposed projects (see Appendix I).

**Table 4. Comparison of the Environmental Impacts of Each Alternative**

	<b>A. Ground water resources/ Landowner Concerns</b>	<b>B. Fish Resources</b>	<b>C. Oregon Water Law: CFS potentially protected instream</b>	<b>D. Cultural Resources</b>
<b>Alternative A – No Action</b>	Aquifer recharge continues	No change- Districts currently provide bypassed flows in Walla Walla River	None	None
<b>Alternative B - Proposed Action</b>	Possible groundwater impacts, but unquantified. Effects minimized through aquifer recharge, and increased application of water to fields.	Project won’t change total flows bypassed – will incrementally increase amount of legally protected flow	Up to ~4 cfs	Possible, but addressed with additional review and coordination with Service archeologists

## 5.0 Literature Cited

Bower, Bob. 2004. Hudson Bay Aquifer Recharge Testing Project. 2004 Annual Report. Unpublished report. Walla Walla Basin Watershed Council, Milton-Freewater, Oregon. 25 p.

National Marine Fisheries Service. 2006. Draft Snake River Salmon Recovery Plan. Available at: <http://www.snakeriverboard.org/>

Northwest Power and Conservation Council. "Walla Walla Subbasin Plan." In Columbia River Basin Fish and Wildlife Program. Portland, Oregon, 2005.

U.S. Fish and Wildlife Service. 2002. Chapter 11, Umatilla-Walla Walla Recovery Unit, Oregon and Washington. 153 p. In: U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.

**Table 5. List of Agencies, Tribes, Individuals, and Organizations Consulted**

<b>Entity</b>	<b>Individual contacted</b>	<b>Dates contacted</b>
Walla Walla County Watershed Planning	Cathy LaRoque Elena Escalante Matt Rajnus	Numerous conversations and E-mails
Walla Walla Basin Watershed Council	Bob Bower Brian Wolcott	1-4-05 1-10-06
Hudson Bay District Improvement Company	John Zerba	Numerous E-mails; telephone 1-11-06; 6-12-06
Walla Walla River Irrigation District	Brent Stevenson Teresa Yeager	Numerous E-mails and telephone conversations through June, 2006
Walla Walla Bi-State HCP Coordinating committee	18 attendees	September 15, 2005
Walla Walla Bi-State HCP NEPA Scoping meetings	24 attendees, 18 written comment letters, many relevant to listed species, irrigation efficiency, and groundwater.	Public scoping meetings for HCP November 16 & 17, 2006
National Marine Fisheries Service	Randy Tweten, LaGrande Field Office	October 26, 2005

	Dale Bambrick, Ellensburg Field office	January 11, 2006
	Gary Wade, LaGrande Field office	Telephone and emails: June 2006
Confederated Tribes of the Umatilla Indian Reservation	Jed Volkman, Pendleton Brian Mahoney	Telephone 6-13-06 Telephone and E-mails, June 2006.

## ***6.0 List of All Federal Permits***

### Section 7 Endangered Species Act Consultation with NMFS/USFWS-

The Service has determined that there would be no effect to bull trout from the proposed action.

Through discussions with the National Marine Fisheries Service office in LaGrande, OR, the Service determined that there would be no effect to mid-Columbia steelhead from the proposed action.

### Section 106 of the National Historic Preservation Act of 1966, as amended

The Service and the applicants for Partners funding are coordinating with the Service's Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted prior to ground disturbing activities associated with the grants for the proposed projects (see Appendix I).

### Section 404 of the Clean Water Act, as amended.

The proposed project does not require a Clean Water Act Permit (33 CFR part 323.4(a)[3]).

# Appendix I



## United States Department of the Interior

FISH AND WILDLIFE SERVICE, REGION 1  
Cultural Resources Team  
20555 SW Gerda Lane  
Sherwood, Oregon 97140  
503-625-4377 (fax 503-625-4887)

IN REPLY REFER TO:

15 June 2006

To: Michelle Eames  
Spokane FWO, Ecological Services

From: Virginia Parks  
Cultural Resources Team

Subject: Section 106 Compliance in Progress for Two Restoration Projects

This memo is to confirm that you and the applicants for Partners funding are coordinating with the Region 1 Cultural Resources Team (CRT) to ensure Section 106 compliance is satisfactorily conducted prior to ground disturbing activities associated with the grants for the following projects:

**Hudson Bay District Improvement Company - Hy-Line Canal Piping- Walla Walla River Conservation (HCP)**

**Walla Walla River Irrigation District - Powell/ Pleasantview Piping Project (HCP)**

The Service is contributing funds to purchase materials and supplies for approximately 2200 feet and 2550 feet of piping respectively. In both locations, other funds are being used to install the pipes in existing irrigation ditches and cover them with fill from a commercial supplier. These projects are a small portion of a larger habitat restoration plan being implemented by the applicants through partnerships with other federal, state, tribal, and community organizations.

While the subject ditches have been routinely maintained and modified, they were most likely constructed more than 50 years ago. Consequently, they are considered historic properties that are potentially eligible to the National Register of Historic Places (NRHP). Because the proposed activities could have the potential to alter the historic characteristics of the ditches, it is recommended that a professional archaeologist visit the activity areas to assess the situation and, if appropriate, to prepare historic property inventories for the segments of ditch being affected, and complete determinations of eligibility (DOE) prior to implementation of project activities.

The CRT will continue to work with you, the applicants, and other consulting parties to take the necessary steps toward Section 106 compliance.

Thank you for ensuring that cultural resources are considered as part of the Service funding distribution process.

If you have any questions, please don't hesitate to contact me at 503-625-4377 or [virginia\\_parks@fws.gov](mailto:virginia_parks@fws.gov).

## **Appendix II**

**[Walla Walla County summary of on public outreach].**

**Walla Walla HCP Passage Funds**  
Summary of Outreach/Communication effort through June 2006  
in Support of Environmental Review and Assessment process

**Project:** Walla Walla Basin Passage Funds under FWS Agreement No. 144215J003

**Recipient:** Walla Walla County  
310 W. Poplar, Suite 201  
Walla Walla, WA 99362

From early 2005, the Walla Walla Bi-State Habitat Conservation Plan (HCP) Coordinating Committee was engaged in planning for the distribution of these HCP Passage Project funds in the Walla Walla Basin. When the FY 2005 Interior budget appropriation for HCP project funding was formally identified, the HCP Coordinating Committee at its March 15, 2005 meeting reviewed the appropriation language and identified that the funding would be administered by Walla Walla County with the Implementation Workgroup to be consulted for project prioritization. Standardized criteria for adopting projects consistent with the Walla Walla Basin Bi-State HCP objectives were developed, including a scoring matrix to be used by the Implementation Working Group. This information was posted online on the Walla Walla County Watershed Planning website at [www.wallawallawatershed.org](http://www.wallawallawatershed.org), was previewed in the Third-Quarter 2005 Watershed Planning Department Newsletter, and was available for public distribution at meetings of the Walla Walla Basin Watershed Council (June 20, 2005 and October 10, 2005), the Walla Walla WRIA 32 Watershed Planning Unit (September 15, 2005 and September 26, 2005) and the Walla Walla Bi-State Habitat Conservation Plan Coordinating Committee (June 16, 2005 and September 15, 2005).

Projects were solicited during a 30-day duration request for proposals (RFP) period that ended September 8, 2005. This RFP resulted in two proposals being submitted. The Implementation Working Group (IWG) was convened on September 14, 2005 to rank the project proposals received. These proposals were then reviewed, approved and recommended by the Walla Walla Watershed Planning Unit, the Bi-State HCP Coordinating Committee and the Walla Walla Basin Watershed Council to the Walla Walla County Watershed Planning Staff. The project sponsors: Walla Walla River Irrigation District and Walla Walla Basin Watershed Council on behalf of Hudson Bay District Improvement Company each submitted irrigation efficiency projects with related instream flow conservation. Project details were discussed at meetings of the project sponsors, the stakeholder groups previously identified and in the Walla Walla County Board of Commissioners open sessions on numerous dates in 2005 and 2006. The applications were posted online on the Walla Walla County Watershed Planning website at [www.wallawallawatershed.org](http://www.wallawallawatershed.org).

The draft Environmental Assessment was made available to the public on June 23, 2006 for a public review and comment period, ending June 30, 2006. HCP Coordinating Committee members and other stakeholders in the Walla Walla Watershed were notified via email that the draft EA was available for review and comment.